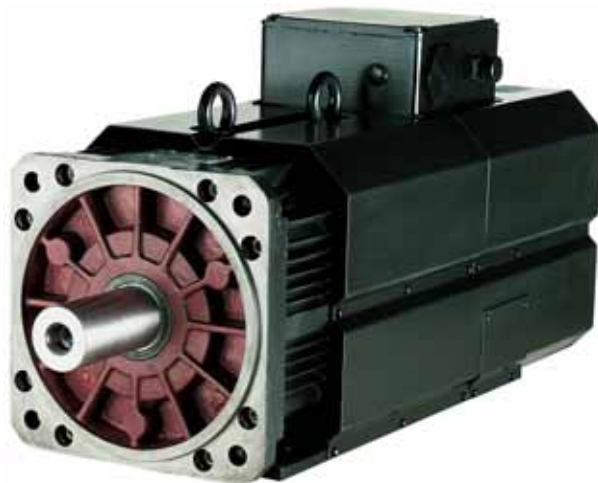


HV SPINDLE SERVO MOTORS 4 to 50kW

The HV series are permanent magnet synchronous motors used for machine tool spindle of traditional type (lathes, grinding machines, milling machines).

The control of synchronous technology gives the possibility to reach a speed range ratio at constant power up to 10.

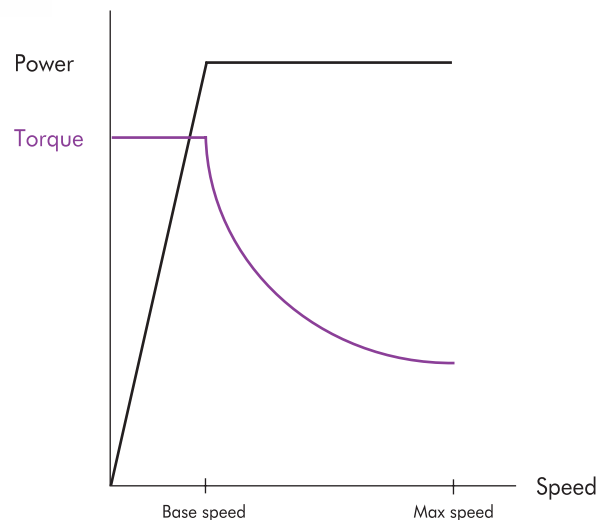
Moreover the HV series present the same characteristics at low speed as an axis servo motor : high torque to weight ratio, low inertia, high torque at low speed...



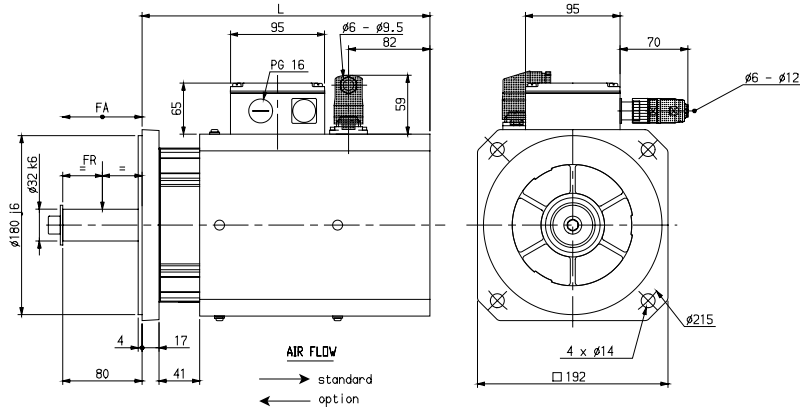
- SPEED UP TO 8000 RPM**
- TORQUE FROM 17 TO 240N.M**
- ROBUST AND COMPACT DESIGN**
- SPEED RANGE RATIO AT CONSTANT POWER UP TO 10**
- HIGH TORQUE AT LOW SPEED**
- LOW INERTIA FOR HIGH ACCELERATION, RAPID CHANGES IN SPEED FOR REDUCED TOOL CHANGING TIME**
- IP 54 PROTECTION**
- CLASS F INSULATION**

| HV - 400V power supply | | | | | |
|------------------------|---|--------------------------|---------------------------------------|----------------------------|--------------------------------|
| Motor | DIGIVEX ⁽¹⁾ Drive Ratings | Torque S1/S6 (N.m) | Power S1/S6 ⁽²⁾ (kW) | Base/Max speed (rpm) | Inertia (kgm ²) |
| HV820EZ | 16/32 | 17/20.4 | 4.3/5.1 | 2390/8000 | 0.0035 |
| HV830EM | 32/64 | 25/30 | 9/10.7 | 3400/8000 | 0.0049 |
| HV840EM | 32/64 | 32/38.4 | 9/10.7 | 2660/8000 | 0.0063 |
| HV930EQ | 32/64 | 63.6/70 | 10/11 | 1480/7000 | 0.018 |
| HV930EL | 50/80 | 64/72.5 | 14.5/16.5 | 2170/7000 | 0.018 |
| HV950EQ | 32/64 | 95 | 10 | 1020/7000 | 0.029 |
| HV950EK | 50/80 | 95 | 15.6 | 1570/7000 | 0.029 |
| HVA30JO | 50/80 | 149 | 16.4 | 1050/6000 | 0.027 |
| HVA30JH | 100/120 | 140/157 | 28/32 | 1940/6000 | 0.027 |
| HVA40JH | 100/120 | 200 | 31 | 1500/6000 | 0.035 |
| HVA40JG | 150/150 | 200/240 | 31/37 | 1480/6000 | 0.035 |

(1) 400V supply voltage
(2) 540V bus voltage



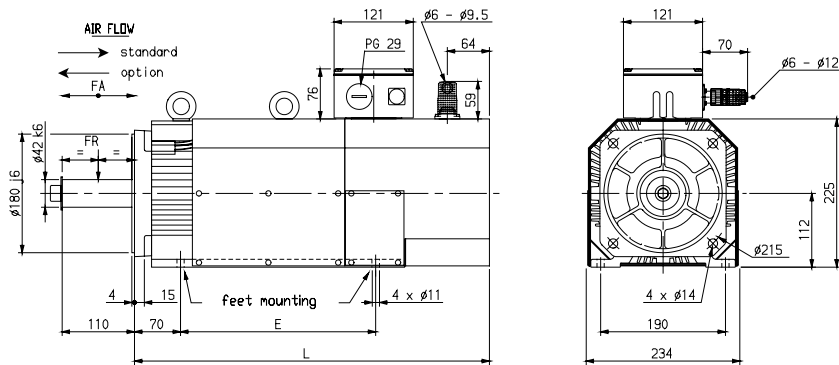
SERVO MOTORS



HV8.. dimensions

| Motor | L (mm) | Weight (kg) | Fr* (daN) | Fa* (daN) |
|--------|--------|-------------|-----------|-----------|
| HV820E | 290 | 21 | 110 | 18 |
| HV830E | 333 | 26 | 120 | 21 |
| HV840E | 374 | 30 | 125 | 25 |

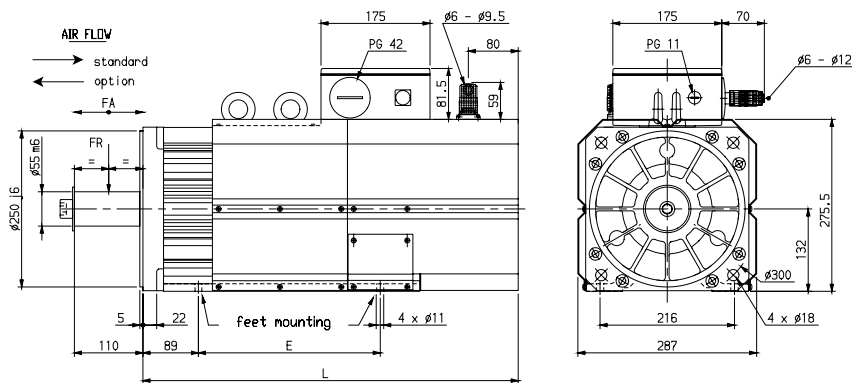
*Fr and Fa not cumulative ; at 3000 rpm



HV9.. dimensions

| Motor | L (mm) | E (mm) | Weight (kg) | Fr* (daN) | Fa* (daN) |
|--------|--------|--------|-------------|-----------|-----------|
| HV930E | 416 | 171 | 51 | 240 | 40 |
| HV950E | 516 | 271 | 69 | 270 | 45 |

*Fr and Fa not cumulative ; at 3000 rpm



HVA.. dimensions

| Motor | L (mm) | E (mm) | Weight (kg) | Fr* (daN) | Fa* (daN) |
|--------|--------|--------|-------------|-----------|-----------|
| HVA30J | 582 | 271 | 100 | 530 | 100 |
| HVA40J | 660 | 349 | 110 | 550 | 100 |

*Fr and Fa not cumulative ; at 1500 rpm

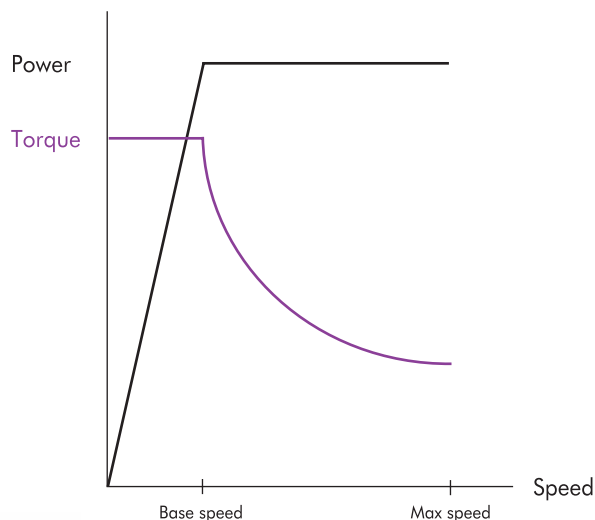
HW ELECTROSPINDLE SYNCHRONOUS MOTORS

2 to 110kW

The HW range of synchronous electrospindle motors has been developed with the aim of solving the problems met in high speed machining.

Compared to conventional asynchronous motors, the HW motors have decisive advantages for quality spindle construction : machining of higher precision, longer bearing lifetime, greater acceleration capacity, higher compactness...

Controlled by the DIGIVEX Drive, the water cooled HW permanent magnets synchronous motors offer torque from 4 to 1250 Nm for speed up to 50000 rpm.



**PERMANENT MAGNETS,
COLD ROTOR TECHNOLOGY**

**LOW INERTIA AND HIGHER
COMPACTNESS COMPARED TO
ASYNCHRONOUS SOLUTION**

**HIGH TORQUE AT LOW SPEED AND
SPEED AT CONSTANT POWER
UP TO 50000 RPM**

**SPEED RANGE RATIO AT CONSTANT
POWER UP TO 10**

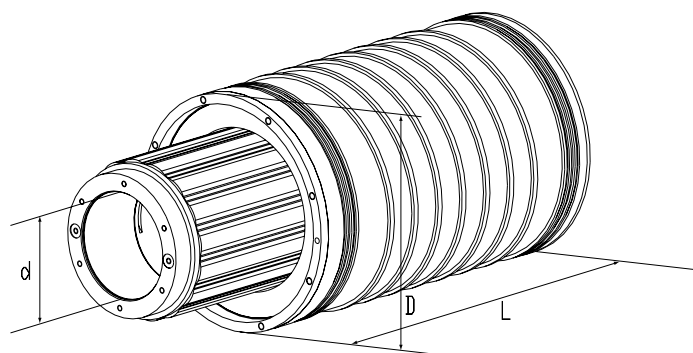
TORQUE FROM 4 TO 1250 N.M

INCREASED MACHINING PRECISION

BETTER SURFACE FINISHING

**HIGH ACCELERATION/DECELERATION
FOR RAPID CYCLES**

REDUCED MAINTENANCE



HW - 400V power supply

| Motor | DIGIVEX ⁽¹⁾ Drive Rating | Torque S1/S6 (N.m) | Power S1/S6 ⁽²⁾ (kW) | Base/Max speed (rpm) | Inertia (kgm ²) | Weight (kg) | Dimensions | | |
|---------|---|--------------------------|---------------------------------------|----------------------------|--------------------------------|----------------|------------|-----------|-----------|
| | | | | | | | L (mm) | D (mm) | d (mm) |
| HW420BU | 8/16 | 4.2 | 2.3 | 5230/50000 | 0.00049 | 3.9 | 143 | 100 | 32 |
| HW420BP | 16/32 | 4.2 | 5 | 11250/50000 | 0.00049 | 3.9 | 143 | 100 | 32 |
| HW420BK | 32/64 | 4.2 | 10 | 23200/50000 | 0.00049 | 3.9 | 143 | 100 | 32 |
| HW430BQ | 16/32 | 6.7 | 4.7 | 6700/50000 | 0.00068 | 5.2 | 176 | 100 | 32 |
| HW430BL | 32/64 | 6.7 | 10 | 14300/50000 | 0.00068 | 5.2 | 176 | 100 | 32 |
| HW430BI | 50/80 | 6.7 | 15.6 | 22300/50000 | 0.00068 | 5.2 | 176 | 100 | 32 |
| HW620CN | 16/32 | 8.3/10 | 4/4.9 | 4680/30000 | 0.0017 | 6.5 | 159 | 130 | 40 |
| HW620CI | 32/64 | 8.3/10 | 8.6/10.4 | 9930/30000 | 0.0017 | 6.5 | 159 | 130 | 40 |
| HW635CI | 32/64 | 15/18 | 8.5/10 | 5410/30000 | 0.003 | 11 | 219 | 130 | 40 |
| HW635CF | 50/80 | 15/18 | 13/15.6 | 8270/30000 | 0.003 | 11 | 219 | 130 | 40 |
| HW820RR | 32/64 | 21.5/26 | 7.3/8.8 | 3230/24000 | 0.007 | 8 | 189 | 180 | 60 |
| HW820RP | 50/80 | 21.5/26 | 11.6/14 | 5140/24000 | 0.007 | 8 | 189 | 180 | 60 |
| HW820CR | 32/64 | 25.8/31 | 8.6/10.3 | 3170/18000 | 0.007 | 8 | 189 | 180 | 60 |
| HW820CP | 50/80 | 25.8/31 | 13.4/16 | 4960/18000 | 0.007 | 8 | 189 | 180 | 60 |
| HW840CR | 32/64 | 57.3/66 | 8.5/10 | 1420/18000 | 0.0137 | 16 | 269 | 180 | 60 |
| HW840CP | 50/80 | 57.3/66 | 13.6/16 | 2270/24000 | 0.0137 | 16 | 269 | 180 | 60 |
| HW840CH | 100/120 | 57.3/66 | 28/32 | 4700/24000 | 0.0137 | 16 | 269 | 180 | 60 |
| HW840CF | 150 | 57.3/70 | 36/44 | 6020/24000 | 0.0137 | 16 | 269 | 180 | 60 |
| HW930CI | 100/120 | 102 | 34 | 3180/20000 | 0.034 | 35 | 302 | 220 | 70 |
| HW930CF | 150 | 102 | 52 | 4870/20000 | 0.034 | 35 | 302 | 220 | 70 |
| HW930CC | 300 | 102 | 100 | 9500/20000 | 0.034 | 35 | 302 | 220 | 70 |
| HW930CJ | 100/120 | 112 | 30 | 2600/20000 | 0.034 | 35 | 302 | 220 | 70 |
| HW930CE | 200 | 112 | 63 | 5330/20000 | 0.034 | 35 | 302 | 220 | 70 |
| HW950CI | 100/120 | 170 | 33 | 1880/20000 | 0.055 | 58 | 422 | 220 | 70 |
| HW950CF | 150 | 170 | 52 | 2920/20000 | 0.055 | 58 | 422 | 220 | 70 |
| HW950CC | 300 | 170 | 105 | 5900/20000 | 0.055 | 58 | 422 | 220 | 70 |
| HW950CJ | 100/120 | 186 | 30 | 1540/20000 | 0.055 | 58 | 422 | 220 | 70 |
| HW950CE | 200 | 186 | 63 | 3240/20000 | 0.055 | 58 | 422 | 220 | 70 |
| HWA30DN | 50/80 | 260 | 15 | 550/12000 | 0.142 | 70 | 355 | 270 | 106 |
| HWA30DF | 100/120 | 260 | 32 | 1190/12000 | 0.142 | 70 | 355 | 270 | 106 |
| HWA30DD | 150 | 260 | 50 | 1820/12000 | 0.142 | 70 | 355 | 270 | 106 |
| HWA30DC | 200 | 260 | 67 | 2460/12000 | 0.142 | 70 | 355 | 270 | 106 |
| HWA30DB | 300 | 260 | 100 | 3710/12000 | 0.142 | 70 | 355 | 270 | 106 |
| HWA50DG | 100/120 | 430/510 | 22/26 | 490/12000 | 0.235 | 120 | 505 | 270 | 106 |
| HWA50DF | 100/120 | 430 | 31 | 690/12000 | 0.235 | 120 | 505 | 270 | 106 |
| HWA50DD | 150 | 430 | 49 | 1080/12000 | 0.235 | 120 | 505 | 270 | 106 |
| HWA50DC | 200 | 430 | 67 | 1480/12000 | 0.235 | 120 | 505 | 270 | 106 |
| HWA50DB | 300 | 430 | 100 | 2250/12000 | 0.235 | 120 | 505 | 270 | 106 |
| HWB20HH | 150 | 575 | 46 | 770/8000 | 0.35 | 120 | 339 | 340 | 152 |
| HWB20HD | 300 | 575 | 95 | 1580/8000 | 0.35 | 120 | 339 | 340 | 152 |
| HWB20HJ | 150 | 600/710 | 37/44 | 590/8000 | 0.35 | 120 | 339 | 340 | 152 |
| HWB20HE | 300 | 600/710 | 77/91 | 1220/8000 | 0.35 | 120 | 339 | 340 | 152 |
| HWB30HH | 150 | 860 | 45 | 500/8000 | 0.49 | 170 | 439 | 340 | 152 |
| HWB30HD | 300 | 860 | 95 | 1050/8000 | 0.49 | 170 | 439 | 340 | 152 |
| HWB30HJ | 150 | 940/1070 | 35/40 | 360/8000 | 0.49 | 170 | 439 | 340 | 152 |
| HWB30HE | 300 | 940/1070 | 76/87 | 775/8000 | 0.49 | 170 | 439 | 340 | 152 |
| HWB40HH | 150 | 1150 | 44 | 365/8000 | 0.64 | 220 | 539 | 340 | 152 |
| HWB40HD | 300 | 1150 | 94 | 780/8000 | 0.64 | 220 | 539 | 340 | 152 |
| HWB40HJ | 150 | 1250/1400 | 34/38 | 260/5800 | 0.64 | 220 | 539 | 340 | 152 |
| HWB40HE | 300 | 1250/1400 | 75/84 | 573/8000 | 0.64 | 220 | 539 | 340 | 152 |
| HWB40HF | 300 | 1250/1500 | 62/74 | 475/8000 | 0.64 | 220 | 539 | 340 | 152 |

(1) 400V supply voltage

(2) 540V bus voltage